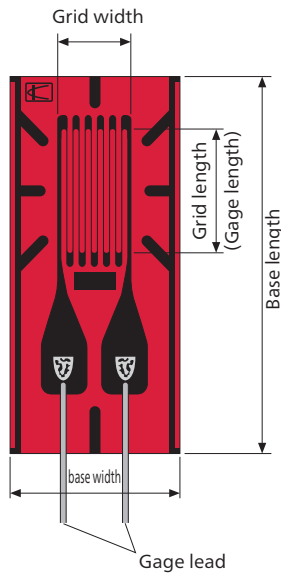


General-purpose Foil Strain Gages KFG

● General-purpose Foil Strain Gages in KFG Series



The KFG series gages use polyimide resin for the base approx. 13 μm thick, ensuring excellent flexibility. Besides indoor measurement, the outstanding moisture resistance lets them effectively perform outdoor measurement. Unless directly exposed to water drop, no coating treatment is required.

Applicable Adhesives and Operating Temperature Range after Curing

- CC-33A: -196 to 120°C (-10 to 80°C with vinyl-coated cable attached)
- CC-35: -30 to 120°C (-10 to 80°C with vinyl-coated cable attached)
- CC-36: -30 to 100°C (-10 to 80°C with vinyl-coated cable attached)
- EP-340: -55 to 150°C (-10 to 80°C with vinyl-coated cable attached)
- PC-600: -196 to 150°C (-10 to 80°C with vinyl-coated cable attached)

Notes on pre-attached lead wire cables

- Standard color of the 2-wire cable pre-attached to uniaxial gages is red (R). If desired, a white, green, yellow or black cable can be pre-attached.
- Standard 3-wire cable pre-attached to uniaxial gages has red stripes. If desired, the red stripes can be changed to blue or yellow stripes.
- In the case of a triaxial gage, 2-wire cables are color-coded with red, white and green stripes for 0°, 90° and 45°, respectively and 3-wire cables, with red, yellow and blue stripes for 0°, 90° and 45°, respectively. The letter code is S in common.

■ Types, lengths and codes of lead wire cables pre-attached to KFG series gages

Types	Polyester-coated 2-wire copper cable	Polyester-coated 3-wire copper cable	Vinyl-coated flat 2-wire cable		Vinyl-coated flat 3-wire cable		Middle-temperature 2-wire cable	Middle-temperature 3-wire cable
Length *	C1,C2,C3,C15, C16,D1,D2,D3, D4,D6,D9,D16, D17,D19,D28, D29 and D31	C1,C2,C3, C15,C16, D1,D4,D9, D16,D17,D19, D28 and D31	C1,C2,C3, C15,C16, D9 and D19	D1,D4, D16,D17, D28,D29, D39	C1,C2,C3, C15,C16, D2,D9,D19 and D31	D1,D4, D16,D17, D28 and D39	C1,C2,C3, C15,C16, D1,D4,D9, D16,D17,D19, D28 and D39	C1,C2,C3, C15,C16, D1,D2,D4,D9, D16,D17,D19, D28,D31 and D39
15 cm	N15C2	N15C3	L15C2R	L15C2S	L15C3R	L15C3S	R15C2	R15C3
30 cm	N30C2	N30C3	L30C2R	L30C2S	L30C3R	L30C3S	R30C2	R30C3
1 m	N1M2	N1M3	L1M2R	L1M2S	L1M3R	L1M3S	R1M2	R1M3
3 m			L3M2R	L3M2S	L3M3R	L3M3S	R3M2	R3M3
5 m			L5M2R	L5M2S	L5M3R	L5M3S	R5M2	R5M3
Oprg. temp. range**	-196 to 150°C		-10 to 80°C				-100 to 150°C	
Remarks	Twisted for 50 cm or longer (With some exception)		L-6, L-9 for 6 m or longer		L-7, L-10 for 6 m or longer		L-11	L-12

* For other lead wire cable lengths, contact us.
 ** Oprg. temp. range: Operating temperature range

When ordering, suffix the lead wire cable code to the model number with a space in between.

E.g.



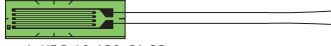

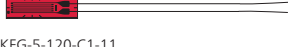
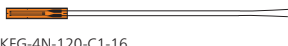







- KFG-5-120-C1-11 N10C3 for the gage with a polyester-coated 3-wire copper cable 15 cm long → **KFG-5-120-C1-11 N15C3**
- KFG-5-120-C1-11 L5M2R for the gage with a vinyl-coated flat 2-wire cable 5 m long → **KFG-5-120-C1-11 L5M2R**
- KFG-5-120-D17-11 L5M3S for the gage with a vinyl-coated flat 3-wire cable 5 m long → **KFG-5-120-D17-11 L5M3S**
- KFG-5-120-C1-11 R5M3 for the gage with a middle-temperature 3-wire cable 5 m long → **KFG-5-120-C1-11 R5M3**
- KFG-5-120-D17-11 R5M2 for the gage with a middle-temperature 2-wire cable 5 m long → **KFG-5-120-D17-11 R5M2**

If no lead wire cable code is suffixed, the gage is delivered with gage leads only (Silver-clad copper wires 25 mm long)

For the types of lead wire cables, refer to page 1-15 and 1-16.



General-purpose Foil Strain Gages KFG

Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material Base color	Dimensions (mm)				Remarks
			Grid		Base		
			Length	Width	Length	Width	
Uniaxial							
Silver-clad copper gage leads 25mm long Resistance: 120 Ω Gage factor: Approx. 2.1							
<ul style="list-style-type: none"> ● Common steel ● Stainless steel ● Aluminum ● Magnesium alloy <p>(Linear expansion coefficient based on the base color to distinguish)</p>							
KFG-30-120-C1  *Figure is KFG-30-120-C1-11	KFG-30-120-C1-11	●	30	3.3	37	5.2	
	KFG-30-120-C1-16	●					
	KFG-30-120-C1-23	●					
	KFG-30-120-C1-27	●					
KFG-20-120-C1  *Figure is KFG-20-120-C1-16	KFG-20-120-C1-11	●	20	5	28	8	
	KFG-20-120-C1-16	●					
	KFG-20-120-C1-23	●					
	KFG-20-120-C1-27	●					
KFG-10-120-C1  *Figure is KFG-10-120-C1-23	KFG-10-120-C1-11	●	10	3	16	5.2	
	KFG-10-120-C1-16	●					
	KFG-10-120-C1-23	●					
	KFG-10-120-C1-27	●					
KFG-6-120-C1  *Figure is KFG-6-120-C1-27	KFG-6-120-C1-11	●	6	1.7	10	3.4	
	KFG-6-120-C1-16	●					
	KFG-6-120-C1-23	●					
	KFG-6-120-C1-27	●					
KFG-5-120-C1  *Figure is KFG-5-120-C1-11	KFG-5-120-C1-5	●	5	1.4	9.4	2.8	For lumber
	KFG-5-120-C1-11	●					
	KFG-5-120-C1-16	●					
	KFG-5-120-C1-23	●					
KFG-4N-120-C1  *Figure is KFG-4N-120-C1-16	KFG-4N-120-C1-11	●	4	0.7	8	1.4	
	KFG-4N-120-C1-16	●					
	KFG-4N-120-C1-23	●					
	KFG-4N-120-C1-27	●					
KFG-3-120-C1  *Figure is KFG-3-120-C1-23	KFG-3-120-C1-11	●	3	1.3	7.4	2.8	
	KFG-3-120-C1-16	●					
	KFG-3-120-C1-23	●					
	KFG-3-120-C1-27	●					
KFG-2-120-C1  *Figure is KFG-2-120-C1-27	KFG-2-120-C1-5	●	2	1.2	6.3	2.8	For lumber
	KFG-2-120-C1-11	●					
	KFG-2-120-C1-16	●					
	KFG-2-120-C1-23	●					
KFG-2N-120-C1  *Figure is KFG-2N-120-C1-11	KFG-2N-120-C1-11	●	2	0.84	5.3	1.4	
	KFG-2N-120-C1-16	●					
	KFG-2N-120-C1-23	●					
	KFG-2N-120-C1-27	●					
KFG-1-120-C1  *Figure is KFG-1-120-C1-16	KFG-1-120-C1-11	●	1	1.1	4.8	2.4	
	KFG-1-120-C1-16	●					
	KFG-1-120-C1-23	●					
	KFG-1-120-C1-27	●					
KFG-1N-120-C1  *Figure is KFG-1N-120-C1-23	KFG-1N-120-C1-11	●	1	0.65	4.2	1.4	
	KFG-1N-120-C1-16	●					
	KFG-1N-120-C1-23	●					
	KFG-1N-120-C1-27	●					
KFG-03-120-C1  *Figure is KFG-03-120-C1-27	KFG-03-120-C1-11	●	0.3	1.4	3.5	2.4	
	KFG-03-120-C1-16	●					
	KFG-03-120-C1-23	●					
	KFG-03-120-C1-27	●					
KFG-02-120-C1  *Figure is KFG-02-120-C1-11	KFG-02-120-C1-11	●	0.2	1.4	3.3	2.4	
	KFG-02-120-C1-16	●					
	KFG-02-120-C1-23	●					
	KFG-02-120-C1-27	●					

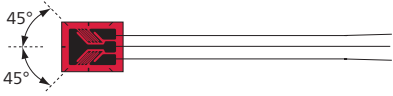
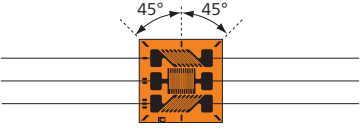
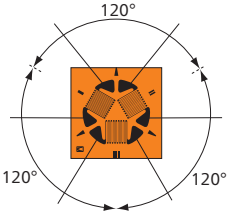
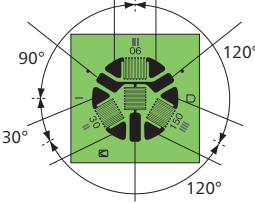
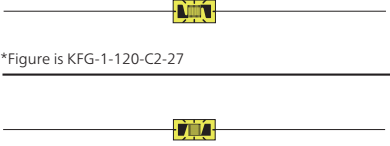


General-purpose Foil Strain Gages KFG



Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material Base color	Dimensions (mm)				Remarks
			Grid		Base		
			Length	Width	Length	Width	
Biaxial, 0°/90° stacked rosette							
Resistance: 120 Ω							
Gage factor: Approx. 2.1							
	KFG-10-120-D16-11	●	10	3	φ21		
	KFG-10-120-D16-16	●					
	KFG-10-120-D16-23	●					
	KFG-10-120-D16-27	●	5	1.4	φ11		
	KFG-5-120-D16-11	●					
	KFG-5-120-D16-16	●					
	KFG-5-120-D16-23	●					
	KFG-5-120-D16-27	●	3	1.3	φ10		
	KFG-3-120-D16-11	●					
	KFG-3-120-D16-16	●					
	KFG-3-120-D16-23	●					
	KFG-3-120-D16-27	●	2	1.2	φ8		
	KFG-2-120-D16-11	●					
	KFG-2-120-D16-16	●					
KFG-2-120-D16-23	●						
KFG-2-120-D16-27	●	1	1.1	φ5			
KFG-1-120-D16-11	●						
KFG-1-120-D16-16	●						
KFG-1-120-D16-23	●						
KFG-1-120-D16-27	●						
*Figure is KFG-10-120-D16-11							
Triaxial, 0°/90°/45° stacked rosette for Stress Analysis							
Resistance: 120 Ω							
Gage factor: Approx. 2.1							
	KFG-10-120-D17-11	●	10	3	φ21		
	KFG-10-120-D17-16	●					
	KFG-10-120-D17-23	●					
	KFG-10-120-D17-27	●	5	1.4	φ11		
	KFG-5-120-D17-11	●					
	KFG-5-120-D17-16	●					
	KFG-5-120-D17-23	●					
	KFG-5-120-D17-27	●	3	1.3	φ10		
	KFG-3-120-D17-11	●					
	KFG-3-120-D17-16	●					
	KFG-3-120-D17-23	●					
	KFG-3-120-D17-27	●	2	1.2	φ8		
	KFG-2-120-D17-11	●					
	KFG-2-120-D17-16	●					
KFG-2-120-D17-23	●						
KFG-2-120-D17-27	●	1	1.1	φ5			
KFG-1-120-D17-11	●						
KFG-1-120-D17-16	●						
KFG-1-120-D17-23	●						
KFG-1-120-D17-27	●						
*Figure is KFG-10-120-D17-23							
Biaxial, 0°/90° plane arrangement							
Resistance: 120 Ω							
Gage factor: Approx. 2.1							
	KFG-2-120-D1-11	●	2	3.2	10	8.5	
	KFG-2-120-D1-16	●					
	KFG-2-120-D1-23	●					
	KFG-2-120-D1-27	●					
*Figure is KFG-2-120-D1-11							
Biaxial, 0°/90° for Torque							
Resistance: 120 Ω							
Gage factor: Approx. 2.1							
	KFG-2-120-D2-11	●	2	3.4	12	7	
	KFG-2-120-D2-16	●					
	KFG-2-120-D2-23	●					
	KFG-2-120-D2-27	●					
*Figure is KFG-2-120-D2-11							

General-purpose Foil Strain Gages KFG

Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material End color	Dimensions (mm)				Remarks
			Grid		Base		
			Length	Width	Length	Width	
Biaxial, 0°/90° for Torque Resistance: 120 Ω Gage factor: Approx. 2.1 	KFG-2-120-D31-11 KFG-2-120-D31-16 KFG-2-120-D31-23 KFG-2-120-D31-27	● ● ● ●	2	1.2	8	6.5	
*Figure is KFG-2-120-D31-11							
Triaxial, 0°/90°/45° Resistance: 120 Ω Gage factor: Approx. 2.1 	KFG-2-120-D3-11 KFG-2-120-D3-16 KFG-2-120-D3-23 KFG-2-120-D3-27	● ● ● ●	2	3.6	11	11	
*Figure is KFG-2-120-D3-16							
Triaxial, 0°/120°/240° Resistance: 120 Ω Gage factor: Approx. 2.1 	KFG-2-120-D4-11 KFG-2-120-D4-16 KFG-2-120-D4-23 KFG-2-120-D4-27 KFG-1-120-D4-11 KFG-1-120-D4-16 KFG-1-120-D4-23 KFG-1-120-D4-27	● ● ● ● ● ● ● ●	2	3.4	12	12	
*Figure is KFG-2-120-D4-16			1	1.7	7	7	
Quadraxial, 0°/30°/90°/150° Resistance: 120 Ω Gage factor: Approx. 2.1 	KFG-2-120-D6-11 KFG-2-120-D6-16 KFG-2-120-D6-23 KFG-2-120-D6-27	● ● ● ●	2	3.4	17	17	
*Figure is KFG-2-120-D6-23							
Uniaxial, with lead wires from both ends Resistance: 120 Ω Gage factor: Approx. 2.1 	KFG-1-120-C2-11 KFG-1-120-C2-16 KFG-1-120-C2-23 KFG-1-120-C2-27 KFG-1-120-C3-11 KFG-1-120-C3-16 KFG-1-120-C3-23 KFG-1-120-C3-27	● ● ● ● ● ● ●	1	1.8	5.6	3	
*Figure is KFG-1-120-C2-27			1	1.8	5.5	2.7	
*Figure is KFG-1-120-C3-27							




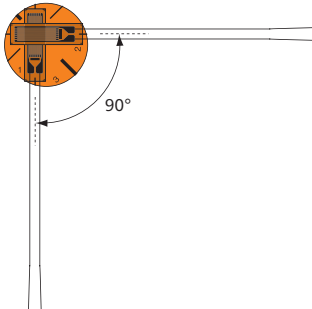
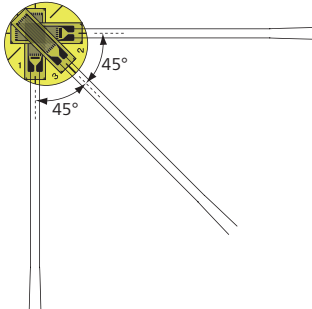
General Purpose

General-purpose Foil Strain Gages KFG



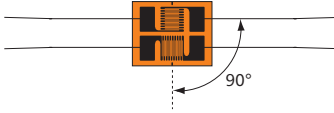
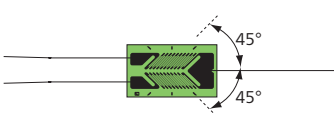
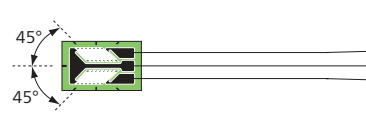

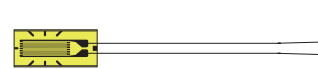
Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material End color	Dimensions (mm)				Remarks
			Grid		Base		
			Length	Width	Length	Width	
Uniaxial, for shearing strain Resistance: 120 Ω Gage factor: Approx. 2.1 Torque measurement is possible by using C15 and C16 in combination.							
 *Figure is KFG-2-120-C15-11	KFG-2-120-C15-11	●	2	0.8	5.2	3	
	KFG-2-120-C15-16	●					
	KFG-2-120-C15-23	●					
	KFG-2-120-C15-27	●					
 *Figure is KFG-2-120-C16-11	KFG-2-120-C16-11	●	2	0.8	5.2	3	
	KFG-2-120-C16-16	●					
	KFG-2-120-C16-23	●					
	KFG-2-120-C16-27	●					
Uniaxial 5-element, for concentrated stress measurement Resistance: 120 Ω Gage factor: Approx. 2.1							
 P = 3 mm for gage length 2 mm P = 2 mm for gage length 1 mm *Figure is KFG-2-120-D9-16 N10C2	KFG-2-120-D9-11 N10C2	●	2	2.2	17	5	A min. qty 5 PC.
	KFG-2-120-D9-16 N10C2	●					
	KFG-2-120-D9-23 N10C2	●					
	KFG-2-120-D9-27 N10C2	●					
	KFG-1-120-D9-11 N10C2	●					
 P = 3 mm for gage length 2 mm P = 2 mm for gage length 1 mm *Figure is KFG-1-120-D9-23 N10C2	KFG-1-120-D9-16 N10C2	●	1	1.4	12	4	A min. qty 5 PC.
	KFG-1-120-D9-23 N10C2	●					
	KFG-1-120-D9-27 N10C2	●					
	KFG-2-120-D19-11 N10C2	●					
	KFG-2-120-D19-16 N10C2	●					
 P = 3 mm for gage length 2 mm P = 2 mm for gage length 1 mm *Figure is KFG-2-120-D19-16 N10C2	KFG-2-120-D19-11 N10C2	●	2	2.5	17	5	A min. qty 5 PC.
	KFG-2-120-D19-16 N10C2	●					
	KFG-2-120-D19-23 N10C2	●					
	KFG-2-120-D19-27 N10C2	●					
	KFG-1-120-D19-11 N10C2	●					
 P = 3 mm for gage length 2 mm P = 2 mm for gage length 1 mm *Figure is KFG-1-120-D19-23 N10C2	KFG-1-120-D19-16 N10C2	●	1	1.5	12	4	A min. qty 5 PC.
	KFG-1-120-D19-23 N10C2	●					
	KFG-1-120-D19-27 N10C2	●					
	KFG-2-120-D19-11 N10C2	●					
	KFG-2-120-D19-16 N10C2	●					
Biaxial 5 element stacked rosette (for stress concentration measurement) Resistance: 120 Ω Gage factor: Approx. 2.1							
 P=2mm *Figure is KFG-1-120-D39-23 N10C2	KFG-1-120-D39-11 N10C2	●	1	1.4 (1.5)	12	6.4	Figures in parentheses are for lower side gages. A min. qty 5 PC.
	KFG-1-120-D39-16 N10C2	●					
	KFG-1-120-D39-23 N10C2	●					
	KFG-1-120-D39-27 N10C2	●					
Uniaxial 60Ω gages Resistance: 60 Ω Gage factor: Approx. 2.1 Use 2 gages in parallel connection (bending compensation possible).							
 *Figure is KFG-5-60-C1-27	KFG-5-60-C1-11	●	5	2	10	3.4	
	KFG-5-60-C1-16	●					
	KFG-5-60-C1-23	●					
	KFG-5-60-C1-27	●					
	KFG-2-60-C1-11	●					
	KFG-2-60-C1-16	●					
KFG-2-60-C1-23	●						
 *Figure is KFG-2-60-C1-27	KFG-2-60-C1-27	●	2	2.3	7.2	3.7	
	KFG-2-60-C1-27	●					

General-purpose Foil Strain Gages KFG

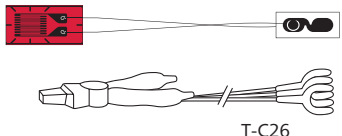
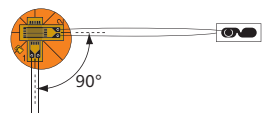
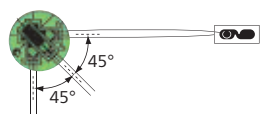
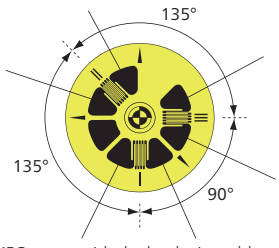
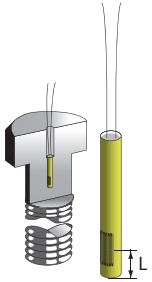

Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material End color	Dimensions (mm)				Remarks
			Grid		Base		
			Length	Width	Length	Width	
Uniaxial 350Ω gages							
Resistance: 350 Ω							
Gage factor: Approx. 2.1							
	KFG-5-350-C1-11	●	5	2	9.4	4.2	
	KFG-5-350-C1-16	●					
	KFG-5-350-C1-23	●					
	KFG-5-350-C1-27	●					
	KFG-3-350-C1-11	●					
	KFG-3-350-C1-16	●	3	2	7.4	4.2	
	KFG-3-350-C1-23	●					
	KFG-3-350-C1-27	●					
	KFG-2-350-C1-11	●	2	2	6.3	4.2	
	KFG-2-350-C1-16	●					
	KFG-2-350-C1-23	●					
	KFG-2-350-C1-27	●					
	KFG-1-350-C1-11	●	1	2	4.8	3.4	
	KFG-1-350-C1-16	●					
KFG-1-350-C1-23	●						
KFG-1-350-C1-27	●						
*Figure is KFG-5-350-C1-11							
Biaxial 350Ω gages, 0°/90° stacked rosette							
Resistance: 350 Ω							
Gage factor: Approx. 2.1							
	KFG-5-350-D16-11	●	5	2	φ11		
	KFG-5-350-D16-16	●					
	KFG-5-350-D16-23	●					
	KFG-5-350-D16-27	●					
	KFG-3-350-D16-11	●					3
	KFG-3-350-D16-16	●					
	KFG-3-350-D16-23	●					
	KFG-3-350-D16-27	●	2	2	φ10		
	KFG-2-350-D16-11	●					
	KFG-2-350-D16-16	●					
	KFG-2-350-D16-23	●					
	KFG-2-350-D16-27	●	1	1.8	φ8		
	KFG-1-350-D16-11	●					
	KFG-1-350-D16-16	●					
KFG-1-350-D16-23	●						
KFG-1-350-D16-27	●						
*Figure is KFG-5-350-D16-16							
Triaxial 350Ω gages, 0°/90°/45° stacked rosette							
Resistance: 350 Ω							
Gage factor: Approx. 2.1							
	KFG-5-350-D17-11	●	5	2	φ11		
	KFG-5-350-D17-16	●					
	KFG-5-350-D17-23	●					
	KFG-5-350-D17-27	●					
	KFG-3-350-D17-11	●					3
	KFG-3-350-D17-16	●					
	KFG-3-350-D17-23	●					
	KFG-3-350-D17-27	●	2	2	φ10		
	KFG-2-350-D17-11	●					
	KFG-2-350-D17-16	●					
	KFG-2-350-D17-23	●					
	KFG-2-350-D17-27	●	1	1.8	φ8		
	KFG-1-350-D17-11	●					
	KFG-1-350-D17-16	●					
KFG-1-350-D17-23	●						
KFG-1-350-D17-27	●						
*Figure is KFG-5-350-D17-27							

General-purpose Foil Strain Gages KFG



Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material End color	Dimensions (mm)				Remarks
			Grid		Base		
			Length	Width	Length	Width	
Biaxial 350Ω gages, 0°/90° Resistance: 350 Ω Gage factor: Approx. 2.1 	KFG-2-350-D1-11 KFG-2-350-D1-16 KFG-2-350-D1-23 KFG-2-350-D1-27	● ● ● ●	2	3	10	8.5	
*Figure is KFG-2-350-D1-16							
Biaxial 350Ω gages for torque, 0°/90° Resistance: 350 Ω Gage factor: Approx. 2.1 	KFG-2-350-D2-11 KFG-2-350-D2-16 KFG-2-350-D2-23 KFG-2-350-D2-27 KFG-2-350-D31-11 KFG-2-350-D31-16 KFG-2-350-D31-23 KFG-2-350-D31-27	● ● ● ● ● ● ● ●	2	4	12	6.8	
*Figure is KFG-2-350-D2-23							
			2	3	10.5	6.5	
*Figure is KFG-2-350-D2-23							
Uniaxial 500Ω gages for transducers Resistance: 500 Ω Gage factor: Approx. 2.1 	KFG-5-500-C1-11 KFG-5-500-C1-16 KFG-5-500-C1-23 KFG-5-500-C1-27 KFG-2-500-C1-11 KFG-2-500-C1-16 KFG-2-500-C1-23 KFG-2-500-C1-27	● ● ● ● ● ● ●	5	3.5	11	4.9	
*Figure is KFG-5-500-C1-27			2	2.6	7.5	4.4	
Uniaxial 1000Ω gages for transducers Resistance: 1000 Ω Gage factor: Approx. 2.1 	KFG-5-1K-C1-11 KFG-5-1K-C1-16 KFG-5-1K-C1-23 KFG-5-1K-C1-27 KFG-2-1K-C1-11 KFG-2-1K-C1-16 KFG-2-1K-C1-23 KFG-2-1K-C1-27	● ● ● ● ● ● ●	5	3.5	11	4.9	
*Figure is KFG-5-1K-C1-27			2	3	7.2	4.5	

General-purpose Foil Strain Gages KFG

Patterns, Gage Resistance, Gage Factor	Models	Corresponds to the Material End color	Dimensions (mm)				Remarks																																
			Grid		Base																																		
			Length	Width	Length	Width																																	
●KFG Series Foil Strain Gages with Gage Terminal																																							
Uniaxial																																							
Resistance: 120 Ω Gage factor: Approx. 2.1																																							
 <p>T-C26</p> <p>(When the clip-equipped dedicated cable is used, the operating temperature range of each adhesive after curing is -10 to 80°C.)</p> <p>*Figure is KFG-2-120-C1-11 T-F7</p>																																							
<p>KFG gages equipped with a gage terminal enable one touch connection/disconnection of the lead wire cable. They are suitable for residual stress measurement with the cutting method. A clip equipped dedicated cable T-C26 (Vinyl-coated, 2 m long) is optionally available.</p> <p>Applicable Adhesives and Operating Temperature Range after Curing</p> <p>PC-600: -196 to 150°C CC-36: -30 to 100°C CC-33A: -196 to 120°C EP-340: -55 to 150°C CC-35: -30 to 120°C</p>																																							
<table border="1"> <tr> <td>KFG-2-120-C1-11 T-F7</td> <td>●</td> <td rowspan="3">2</td> <td rowspan="3">1.2</td> <td rowspan="3">6.3</td> <td rowspan="3">2.8</td> <td rowspan="3">φ0.14 Polyester-coated copper cable 15 mm long</td> </tr> <tr> <td>KFG-2-120-C1-16 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-2-120-C1-23 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-1-120-C1-11 T-F7</td> <td>●</td> <td rowspan="3">1</td> <td rowspan="3">1.1</td> <td rowspan="3">4.8</td> <td rowspan="3">2.4</td> <td rowspan="3">φ0.14 Polyester-coated copper cable 15 mm long</td> </tr> <tr> <td>KFG-1-120-C1-16 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-1-120-C1-23 T-F7</td> <td>●</td> </tr> </table>								KFG-2-120-C1-11 T-F7	●	2	1.2	6.3	2.8	φ0.14 Polyester-coated copper cable 15 mm long	KFG-2-120-C1-16 T-F7	●	KFG-2-120-C1-23 T-F7	●	KFG-1-120-C1-11 T-F7	●	1	1.1	4.8	2.4	φ0.14 Polyester-coated copper cable 15 mm long	KFG-1-120-C1-16 T-F7	●	KFG-1-120-C1-23 T-F7	●										
KFG-2-120-C1-11 T-F7	●	2	1.2	6.3	2.8	φ0.14 Polyester-coated copper cable 15 mm long																																	
KFG-2-120-C1-16 T-F7	●																																						
KFG-2-120-C1-23 T-F7	●																																						
KFG-1-120-C1-11 T-F7	●	1	1.1	4.8	2.4	φ0.14 Polyester-coated copper cable 15 mm long																																	
KFG-1-120-C1-16 T-F7	●																																						
KFG-1-120-C1-23 T-F7	●																																						
Biaxial, 0°/90° stacked rosette																																							
Resistance: 120 Ω Gage factor: Approx. 2.1																																							
 <p>*Figure is KFG-2-120-D16-16 T-F7</p>																																							
<table border="1"> <tr> <td>KFG-2-120-D16-11 T-F7</td> <td>●</td> <td rowspan="3">2</td> <td rowspan="3">1.2</td> <td rowspan="3">φ8</td> <td rowspan="3">φ0.14 Polyester-coated copper cable 15 mm long</td> </tr> <tr> <td>KFG-2-120-D16-16 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-2-120-D16-23 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-1-120-D16-11 T-F7</td> <td>●</td> <td rowspan="3">1</td> <td rowspan="3">1.1</td> <td rowspan="3">φ5</td> <td rowspan="3">φ0.14 Polyester-coated copper cable 15 mm long</td> </tr> <tr> <td>KFG-1-120-D16-16 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-1-120-D16-23 T-F7</td> <td>●</td> </tr> </table>								KFG-2-120-D16-11 T-F7	●	2	1.2	φ8	φ0.14 Polyester-coated copper cable 15 mm long	KFG-2-120-D16-16 T-F7	●	KFG-2-120-D16-23 T-F7	●	KFG-1-120-D16-11 T-F7	●	1	1.1	φ5	φ0.14 Polyester-coated copper cable 15 mm long	KFG-1-120-D16-16 T-F7	●	KFG-1-120-D16-23 T-F7	●												
KFG-2-120-D16-11 T-F7	●	2	1.2	φ8	φ0.14 Polyester-coated copper cable 15 mm long																																		
KFG-2-120-D16-16 T-F7	●																																						
KFG-2-120-D16-23 T-F7	●																																						
KFG-1-120-D16-11 T-F7	●	1	1.1	φ5	φ0.14 Polyester-coated copper cable 15 mm long																																		
KFG-1-120-D16-16 T-F7	●																																						
KFG-1-120-D16-23 T-F7	●																																						
Triaxial, 0°/90°/45° stacked rosette																																							
Resistance: 120 Ω Gage factor: Approx. 2.1																																							
 <p>*Figure is KFG-2-120-D17-23 T-F7</p>																																							
<table border="1"> <tr> <td>KFG-2-120-D17-11 T-F7</td> <td>●</td> <td rowspan="3">2</td> <td rowspan="3">1.2</td> <td rowspan="3">φ8</td> <td rowspan="3">φ0.14 Polyester-coated copper cable 15 mm long</td> </tr> <tr> <td>KFG-2-120-D17-16 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-2-120-D17-23 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-1-120-D17-11 T-F7</td> <td>●</td> <td rowspan="3">1</td> <td rowspan="3">1.1</td> <td rowspan="3">φ5</td> <td rowspan="3">φ0.14 Polyester-coated copper cable 15 mm long</td> </tr> <tr> <td>KFG-1-120-D17-16 T-F7</td> <td>●</td> </tr> <tr> <td>KFG-1-120-D17-23 T-F7</td> <td>●</td> </tr> </table>								KFG-2-120-D17-11 T-F7	●	2	1.2	φ8	φ0.14 Polyester-coated copper cable 15 mm long	KFG-2-120-D17-16 T-F7	●	KFG-2-120-D17-23 T-F7	●	KFG-1-120-D17-11 T-F7	●	1	1.1	φ5	φ0.14 Polyester-coated copper cable 15 mm long	KFG-1-120-D17-16 T-F7	●	KFG-1-120-D17-23 T-F7	●												
KFG-2-120-D17-11 T-F7	●	2	1.2	φ8	φ0.14 Polyester-coated copper cable 15 mm long																																		
KFG-2-120-D17-16 T-F7	●																																						
KFG-2-120-D17-23 T-F7	●																																						
KFG-1-120-D17-11 T-F7	●	1	1.1	φ5	φ0.14 Polyester-coated copper cable 15 mm long																																		
KFG-1-120-D17-16 T-F7	●																																						
KFG-1-120-D17-23 T-F7	●																																						
●KFG Series Foil Strain Gages for Boring Method																																							
Triaxial, 0°/135°/90°																																							
Resistance: 120 Ω Gage factor: Approx. 2.1																																							
 <p>For KFG gages with the lead wire cable pre-attached, refer to page 1-18.</p> <p>*Figure is KFG-3-120-D28-27</p>																																							
<p>Designed to measure residual stress released by the boring method.</p> <p>Applicable Adhesives and Operating Temperature Range after Curing</p> <p>CC-33A: -196 to 120°C EP-340: -55 to 150°C CC-35: -30 to 120°C PC-620: -196 to 150°C CC-36: -30 to 100°C</p>																																							
<table border="1"> <tr> <td>KFG-3-120-D28-11</td> <td>●</td> <td rowspan="3">3</td> <td rowspan="3">2</td> <td rowspan="3">φ19.8</td> <td rowspan="3">Gage center diameter 10.8</td> </tr> <tr> <td>KFG-3-120-D28-16</td> <td>●</td> </tr> <tr> <td>KFG-3-120-D28-23</td> <td>●</td> </tr> <tr> <td>KFG-3-120-D28-27</td> <td>●</td> <td rowspan="3">1.5</td> <td rowspan="3">1.3</td> <td rowspan="3">φ12</td> <td rowspan="3">Gage center diameter 5.5</td> </tr> <tr> <td>KFG-1.5-120-D28-11</td> <td>●</td> </tr> <tr> <td>KFG-1.5-120-D28-16</td> <td>●</td> </tr> <tr> <td>KFG-1.5-120-D28-23</td> <td>●</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>KFG-1.5-120-D28-27</td> <td>●</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>								KFG-3-120-D28-11	●	3	2	φ19.8	Gage center diameter 10.8	KFG-3-120-D28-16	●	KFG-3-120-D28-23	●	KFG-3-120-D28-27	●	1.5	1.3	φ12	Gage center diameter 5.5	KFG-1.5-120-D28-11	●	KFG-1.5-120-D28-16	●	KFG-1.5-120-D28-23	●					KFG-1.5-120-D28-27	●				
KFG-3-120-D28-11	●	3	2	φ19.8	Gage center diameter 10.8																																		
KFG-3-120-D28-16	●																																						
KFG-3-120-D28-23	●																																						
KFG-3-120-D28-27	●	1.5	1.3	φ12	Gage center diameter 5.5																																		
KFG-1.5-120-D28-11	●																																						
KFG-1.5-120-D28-16	●																																						
KFG-1.5-120-D28-23	●																																						
KFG-1.5-120-D28-27	●																																						
●KFG Series Foil Strain Gages for Measuring Axial Tension of Bolts																																							
Uniaxial																																							
Resistance: 120 Ω Gage factor: Approx. 1.9																																							
 <p>Length from the tip of base to the center of grid</p> <table border="1"> <tr> <td>L</td> <td>KFG-3 : 2.7mm</td> </tr> <tr> <td></td> <td>KFG-1.5 : 1.75mm</td> </tr> </table>								L	KFG-3 : 2.7mm		KFG-1.5 : 1.75mm																												
L	KFG-3 : 2.7mm																																						
	KFG-1.5 : 1.75mm																																						
<p>If it is difficult to bond a strain gage to the surface of a bolt for measuring the tightening stress, these gages enable the measurement by embedding into a hole, 2 mm diameter, bored from the top head of the bolt. They are applicable to materials having a linear expansion coefficient of 11 μm/m per °C.</p> <p>φ0.14 Polyester-coated copper cable 5 mm long</p> <p>Applicable Adhesives and Operating Temperature Range after Curing</p> <p>EP-180 Normal temperature to 50°C</p> <p>A min. qty 5 PC.</p>																																							
<p>Options Dedicated gage terminal</p> <table border="1"> <thead> <tr> <th>Model</th> <th>Dimensions</th> <th>Base material</th> <th>Conductor material</th> <th>Remarks</th> </tr> </thead> <tbody> <tr> <td>T-F29</td> <td>Outer: φ6 Inner: φ2.5</td> <td>Glass epoxy</td> <td>Copper foil</td> <td>For bolt gages</td> </tr> </tbody> </table> <p style="text-align: right;">  T-F29 </p>								Model	Dimensions	Base material	Conductor material	Remarks	T-F29	Outer: φ6 Inner: φ2.5	Glass epoxy	Copper foil	For bolt gages																						
Model	Dimensions	Base material	Conductor material	Remarks																																			
T-F29	Outer: φ6 Inner: φ2.5	Glass epoxy	Copper foil	For bolt gages																																			
<table border="1"> <tr> <td>KFG-3-120-C20-11</td> <td></td> <td>3</td> <td>app.6</td> <td>11.5</td> <td>φ1.9</td> <td>Bore diameter 2</td> </tr> <tr> <td>KFG-1.5-120-C20-11</td> <td></td> <td>1.5</td> <td>app.6</td> <td>5</td> <td>φ1.9</td> <td>Bore diameter 2</td> </tr> </table>								KFG-3-120-C20-11		3	app.6	11.5	φ1.9	Bore diameter 2	KFG-1.5-120-C20-11		1.5	app.6	5	φ1.9	Bore diameter 2																		
KFG-3-120-C20-11		3	app.6	11.5	φ1.9	Bore diameter 2																																	
KFG-1.5-120-C20-11		1.5	app.6	5	φ1.9	Bore diameter 2																																	